

ABSTRACT

A virtual or real image display system includes a primary image source for projecting a primary image from the start of a primary light path to an end of the primary light path at which the primary image is viewable, a mirror, a beamsplitter, a quarter wave plate, and a linear polarizer. The beamsplitter is positioned in the primary light path between the primary image source and the mirror. The quarter wave plate is positioned in the primary light path between the first beamsplitter and the mirror. The linear polarizer is positioned at or near a front window placed in the primary light path between the end of the primary light path at which the image is viewable and the first beamsplitter. Positioning the quarter wave plate between the beamsplitter and the mirror allows outside light to remain circularly polarized between the quarter wave plate and the mirror, avoiding the introduction of an elliptical component to the outside light before the light impinges on the front window. The linear polarizer then effectively blocks substantially all the outside light, substantially eliminating ghost image formation from the outside light source. Positioning the beamsplitter at an incline provides a further advantage whereby a high percentage of outside light entering the system and linear polarized by the front window is reflected upward and out of the system by the beamsplitter. The outside light intensity within the imaging system is greatly decreased, further contributing to decreased ghost image formation.